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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,709	09/19/2003	Mark E. Reindle	RYLZ 2 01010	5999
27885	7590	09/15/2006	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			SNIDER, THERESA T	
			ART UNIT	PAPER NUMBER

1744

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/665,709

Applicant(s)

REINDLE ET AL.

Examiner

Theresa T. Snider

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-38 is/are rejected.
- 7) ☒ Claim(s) 44-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9/19/03, 1/12, 7/26, 8/6/04 & 9/14/05.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-29, drawn to a method of controlling a vacuum cleaner, classified in class 134, subclass 21.
  - II. Claims 30-48, drawn to a vacuum cleaner, classified in class 15, subclass 319.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to practice another and materially different process.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Jay Moldovanyi on 8/30/2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 30-48.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-29 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1744

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Objections***

6. Claim 48 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 48 fails to further structurally limit the apparatus but rather defines a function of use.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 32 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 32, line 5, 'the suction motor' lacks proper antecedent basis.

Art Unit: 1744

Claim 37, it is unclear as to which additional elements are required and how they relate to the housing. Are the elements meant to be a positive limitation or just in the preamble?

Claim 47, line 6, 'type' should be deleted.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1744

12. Claims 30-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al..

Getz et al. discloses a similar vacuum cleaner however fails to disclose a sensor processor and controller processor.

Getz et al. discloses a housing (fig. 1, #34).

Getz et al. disclose a suction airflow sensor that is a differential pressure sensor for detecting a difference in pressure between ambient and a flow path disposed within the housing (fig. 14, #116,118).

Getz et al. discloses a microcomputer in communication with the sensor (col. 3, lines 64-67). Grasso et al. discloses a vacuum cleaner with a pressure differential having a sensor processor and controller processor in communication with the sensor processor for selectively controlling the vacuum source (col. 5, lines 10-18). It would have been obvious to one of ordinary skill in the art to provide the processor and controller of Grasso et al. in Getz et al. to allow for the most effective processing of data and prevention of overheating of the vacuum source.

Getz et al. discloses a vacuum source (fig. 14, #40).

With respect to claim 31, Getz et al. discloses a status indicator (col. 4, lines 25-44).

With respect to claim 32, Getz et al. discloses means for determining whether the suction airflow path is obstructed by a foreign object (col. 4, lines 36-40).

With respect to claim 33, Getz et al. discloses means for determining whether a dirt receptacle is generally full (col. 4, lines 41-44).

Art Unit: 1744

With respect to claim 34, Getz et al. discloses means for determining when a filter is generally blocked (col. 3, lines 57-58).

With respect to claim 35, Getz et al. discloses the status indicator including at least four illuminated displays (fig. 2).

With respect to claim 37, Getz et al. discloses the vacuum cleaner being a canister-like vacuum cleaner (fig. 1).

With respect to claim 38, Getz et al. discloses a moveable brush mounted to the housing (fig. 1, #16). Getz et al. discloses a brush motor (fig. 1, #18). Getz et al. discloses a brush motor controller (col. 6, lines 55-62).

13. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. as applied to claim 31 above, and further in view of Salem et al..

Getz et al. in view of Grasso et al. disclose a similar vacuum cleaner however fail to disclose the status indicators being audible.

Salem et al. discloses a vacuum cleaner that can have either illuminated or audible status indicators (col. 16, lines 3-6). It would have been obvious to one of ordinary skill in the art to provide the audible indicator of Salem et al. in Getz et al. in view of Grasso et al. to alert the operator to an adverse condition when one is not looking at the controls.

14. Claims 39-40 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. as applied to claim 38 above, and further in view of McCormick.



Getz et al. in view of Grasso et al. discloses a similar vacuum cleaner however fails to disclose an overcurrent sensor and reset switch.

McCormick discloses a vacuum cleaner with an overcurrent sensor and reset switch for a brush to prevent overload of the motor when the brush becomes bound by fringed from a rug (col. 5, line 63-col. 6, line 7). It would have been obvious to one of ordinary skill in the art to provide the overcurrent sensor and reset switch of McCormick in Getz et al. in view of Grasso et al. to provide for a way to prevent overload of the brush motor if the brush becomes bound by fringe from a rug.

With respect to claims 40 and 43, it would have been obvious to one of ordinary skill in the art to determine the most appropriate overcurrent electrical components in Getz et al. in view of Grasso et al. and McCormick to allow for the most effective signal processing.

15. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and McCormick as applied to claim 39 above, and further in view of Baker.

Grasso et al. in view of Getz et al. and McCormick discloses a similar vacuum cleaner however fails to disclose a feedback signal including a quantity of brush motor revolutions.

Baker discloses a vacuum cleaner that uses the quantity of brush motor revolutions as a feedback signal to monitor the condition of the brush motor (col. 5, lines 1-29). It would have been obvious to one of ordinary skill in the art to provide use the quantity of brush motor revolutions as a feedback signal to monitor the condition of the brush motor in

Getz et al. in view of Grasso et al. and McCormick to allow for the most effective monitoring of the brush motor operation to prevent an overcurrent situation.

***Allowable Subject Matter***

16. Claims 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

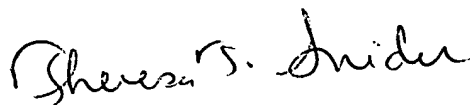
17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim, Bowerman, Mouw et al., Di Nunzio et al. and Thur et al. discloses differential pressure sensors used in vacuum cleaners. Martin discloses a vacuum cleaner with pressure sensors to determine the pressure differential between ambient and the inside of the cleaner. Delmas et al. discloses a vacuum cleaner that uses a pressure measurement to determine the type of surface that is being treated by the cleaner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Friday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Theresa T. Snider". The signature is written in a cursive, flowing style.

Theresa T. Snider  
Primary Examiner  
Art Unit 1744

9/13/06